In the claims:

Claims 1 -39 (cancelled)

40. (previously presented) In an edge node having ingress ports, output ports, a switching fabric, a controller, and a time counter at each of said output ports, a method of data burst formulation comprising steps of:

receiving burst-transfer permits at said controller, each of the burst transfer permits specifying a burst size;

sorting said burst-transfer permits according to destination;

distributing said burst-transfer permits to respective output ports;

receiving data packets of variable sizes at said ingress ports;

segmenting each of said data packets into segments of a predefined size to produce a segmented packet, wherein a last segment that is smaller than said predefined size is null padded;

switching each of said segments to a corresponding output port;

concatenating, at said corresponding output port, segments of a common destination to form data bursts according to respective burst-transfer permits;

modulating an optical carrier by said data bursts to produce a modulated optical carrier; and

transmitting said modulated optical carrier to a core node.

41. (original) The method of claim 40 wherein said concatenating step includes the further step of removing any null-padding from each segmented packet.

42. (original) The method of claim 41 including the further step of extending the size of a data burst by null-padding to be an integer multiple of a prescribed data-size.

43. (original) The method of claim 42 including the further step of transmitting said data burst at a time based at least in part on a reading of said time counter.